

## When we destroy forests, we lose millennia of data chronicling earth, human history

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It is well known that when a forest is destroyed, ecosystems and countless species of fauna and flora are lost. But along with this, vast amounts of irreplaceable data contained within forests — crucial for understanding our current physical world — are also lost. This geological, climatological, and archaeological data helps us understand climate change and the effects of habitat destruction.

As we rapidly head toward a point where the effects of the climate crisis will become irreversible, it is increasingly vital for us to save not just trees but also the information they hold. No amount of off-setting and reforestation can bring back the wealth and records of time we stand to lose when old-growth forests are destroyed.

Having evolved around 380 million years ago, trees are some of the most ancient living things on earth and they give us a glimpse into primeval time. Such study of deep-time data gives us insights into what humans are inflicting upon the natural world. Dendrochronology — the study of geological data present in the age rings of trees — allows us to see emission levels, particulate pollution, moisture levels, drought conditions, forest fires, and indeed pandemics told like stories in the wood.

Leonardo DaVinci was the first to note that the rings of a tree responded to climatic conditions. Each ring holds data about what the tree, and thereby that particular forest, went through. If we were to take a sample of the soil core of that forest, it would say much more. Essentially whatever ecosystem an old-growth forest rests on is more ancient than the forest itself. Trees hold memories, and these are etched so deeply into their tissue that they can be studied long after they are functionally dead.

Dendroclimatology, a subfield, is used to track extreme climate events as well as gauge the variability of climate. This data not only tells us about what the climatic conditions were, but is also useful to predict what they will be.

Protecting trees and their forests is one of the primary functions of the Environment Impact Assessment (EIA) notification. However, its latest draft is being widely protested at the moment for instead enabling environmental destruction during a global pandemic. The Ministry of Environment and Forests (MoEF), headed by Prakash Javadekar — who is incidentally also the Minister for Heavy Industry — has been busy churning out clearances. One of the biggest ones to have come out is the Etalin Hydroelectric Project on the Dibang river, Arunachal Pradesh. This project was rejected twice earlier because the area is an ecologically sensitive zone with high seismic activity.

More pertinently, the area has one of the last untouched old-growth forests left in the country. This ecosystem shows evidence of having evolved from the last Ice Age, nearly 11,000 years ago. This predates any modern civilization that we know of. The proposed Etalin project, in stark contrast, has a productive life of only around 60 years. Further, as this dam is dependent on glacial melt, its energy output will continue to decrease over the coming decades. Thereafter, this dam will entirely lose its value and be abandoned.

The MoEF is a body that is in charge of safeguarding the environment, not providing clearances to extractive industries. There are several studies that show that the economic value of intact forests far outweigh the gains made through its decimation. One of the best ways to prevent further warming of the planet, and future pandemics, is to protect old-growth forests like the Dibang Valley.

Forests are not merely just carbon sinks. Along with being repositories of priceless information, they are also one of our most pervasive cultural symbols. One of the first things we learn to draw as children are trees, and they are the largest thing that most urban dwellers will encounter in their lives. Our natural world is the grandest monument there is, and the destruction of our immense natural wealth is abhorrent. Despite efforts by the government to muffle activists spreading awareness about the EIA draft mentioned above, protests rage on. Citizens have the option to register their dissent before August 11th. Environmental rights are, after all, a universal human right and not just the domain of conservationists.

Every generation has the responsibility to safeguard earth's natural resources for the future, according to the principle of inter-generational equity. This also extends to protecting priceless information about deep-time. Demanding to live in this manner is the strongest weapon we have for creating a safer and more just world.

Source: <https://theswaddle.com/when-we-destroy-forests-we-lose-millennia-of-data-chronicling-earth-human-history/>